



WP4 – Computational Platform

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2009 H1N1 Pandemic:

Arrival Times:

- arrival date of all the countries infected until end of August 2009 (.txt)

Early Outbreak Timelines:

- cumulative number of confirmed cases worldwide (WHO) from April 24, 2009 to July 6, 2009 (.txt)
- cumulative number of confirmed cases in Mexico from March 11, 2009 to August 31, 2009 (.txt)
- cumulative number of confirmed cases in Argentina from April 25, 2009 to June 20, 2009 (.txt)
- cumulative number of confirmed cases in Australia from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Brazil from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Australia from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Canada from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Mainland China from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Germany from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Hong Kong from May 1, 2009 to June 20, 2009 (.txt)
- cumulative number of confirmed cases in Japan from April 25, 2009 to June 20, 2009 (.txt)
- cumulative number of confirmed cases in Philippines from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Singapore from May 26, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Philippines from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Thailand from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in United Kingdom from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in USA from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in Colombia from May 3, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in Costa Rica from April 28, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in Cuba from May 12, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in Philippines from April 25, 2009 to June 19, 2009 (.txt)
- cumulative number of confirmed cases in France from May 1, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in Guatemala from May 6, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in Netherlands from April 30, 2009 to July 3, 2009 (.txt)
- cumulative number of confirmed cases in El Salvador from May 4, 2009 to July 3, 2009 (.txt)
- number of new confirmed cases in Australia, by state, from May 4, 2009 to July 19, 2009 (.xls)

Fraction of imported cases:

- fraction of imported cases in Germany (.txt and .gnumeric)
- fraction of imported cases in Brazil (.txt and .gnumeric)
- fraction of imported cases in France (.txt and .gnumeric)
- fraction of imported cases in Greece (.txt and .gnumeric)
- fraction of imported cases in Japan (.txt and .gnumeric)
- fraction of imported cases in Netherlands (.txt and .gnumeric)
- fraction of imported cases in Spain (.txt and .gnumeric)
- fraction of imported cases in United Kingdom (.txt and .gnumeric)

Worldwide surveillance reports:

- Argentina weekly surveillance reports - weeks 34, 38, 50 (.pdf)
- Australia weekly surveillance reports - 28 Aug, 18 Sep, 19 Oct, 18 Dec 2009 (.pdf)
- Bolivia weekly surveillance report - weeks 32 (.pdf)
- Brazil weekly surveillance reports - weeks 34, 36, 37 (.pdf)
- Argentina weekly surveillance reports - weeks 34, 38, 50 (.pdf)
- Chile weekly surveillance reports - 1 Sep, 30 Dec (.pdf)
- France weekly surveillance reports - weeks 47,2009 to 1,2010 (.pdf)
- Hong Kong weekly surveillance reports - 7 Jan 2010, 21 Jan 2010 (.pdf)
- Ireland weekly surveillance reports - weeks 36 to 48, 2009 (.pdf)
- Italy weekly surveillance reports - weeks 46, 2009 to 5, 2010 (.pdf)
- Korea weekly surveillance reports - weeks 43, 50, 53(.pdf)
- Morocco weekly surveillance reports - weeks 49, 50, 51, 2 (.pdf)
- New Zealand weekly surveillance reports - weeks 36, 41, 51 (.pdf)
- Oman weekly surveillance reports - weeks 43, 2009 to 1, 2010 (.pdf)
- Peru weekly surveillance reports - weeks 33, 35(.pdf)
- South Africa weekly surveillance reports - 30 Aug 2009 (.pdf)
- Taiwan weekly surveillance reports - weeks 36, 2009 to 2,2010 (.pdf)
- Thailand weekly surveillance reports - weeks 51,2009 to 3,2010 (.pdf)
- United Kingdom weekly surveillance reports - weeks 30,2009 to 3,2010 (.pdf)
- Uruguay weekly surveillance reports - weeks 34, 43 (.doc and .pdf)

Weekly incidence reported during the winter wave in:

- 63 different countries (.txt)
- 10 regions of US (.txt)
- 4 regions of UK (.txt)
- 9 regions of Russia (.txt)
- 4 regions of India (.txt)
- 19 regions of France (.txt)

Mexican reports:

- Situacion actual epidemia May 22, 2009 (.pdf)
- Situacion actual epidemia Jun 2, 2009 (.pdf)
- Situacion actual epidemia Jun 23, 2009 (.pdf)
- Situacion actual epidemia Sep 11, 2009 (.pdf)
- Situacion actual epidemia Nov 27, 2009 (.pdf)
- Situacion actual epidemia Jan 27, 2010 (.pdf)

Travel restrictions/screening:

- Known measures adopted following the H1N1 pandemic by 40 countries (40 .pdf files)
- Indian airport screening reports from May 3, 2009 to July 4, 2009 (.doc)

Mobility:

- number of commuters between Mexico and USA (.xls)



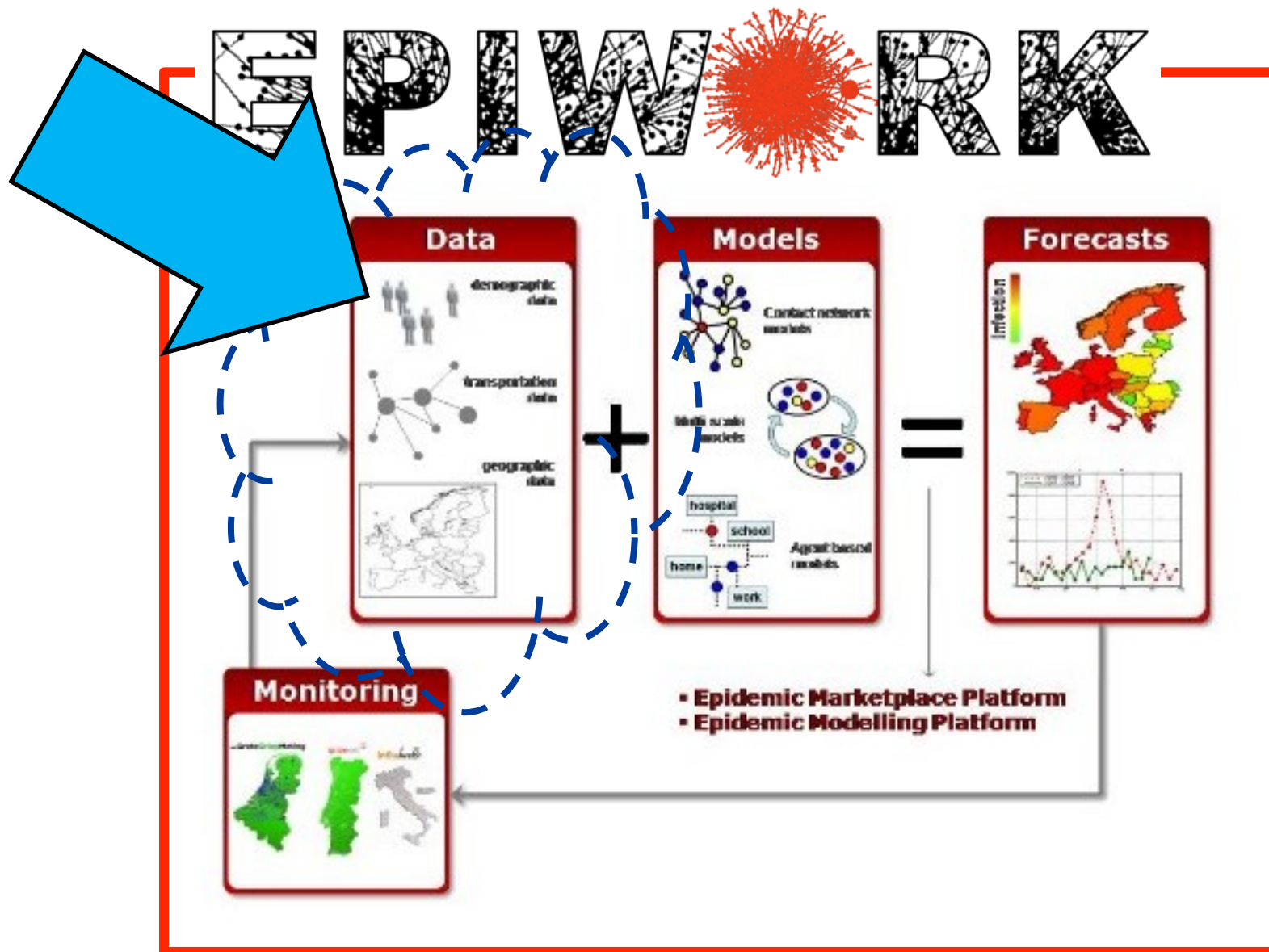
WP3 – Information Platform

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What will be necessary to predict epidemics precisely?

- **Data** of many different types and many unrelated sources.
 - Improved accuracy makes required data a never-ending story
 - We all want to see realistic and timely plots of epidemics propagation.
- Available, but **hard to find, collect and maintain!**

Número de participantes

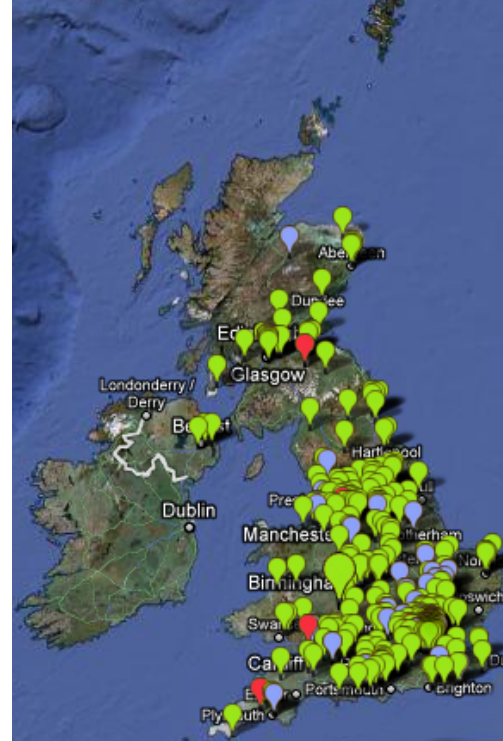
Portugal		5477 participantes
Holanda		20906 participantes
Bélgica		5839 participantes
Itália		3019 participantes
México		3950 participantes
Brasil		370 participantes
Reino Unido		5551 participantes
Australia		7776 participantes
Montreal (CA)		951 participantes

de **GroteGriepMeting.nl**

-  meting (15444)
-  verkouden (3602)
-  vermoedelijk griep (87)
-  grens postcode gebied



Epiwork WP5 Amsterdam



gripenet 

<http://www.gripenet.pt/>

INFLUWEB

 persone senza sintomi  persone con raffreddore  persone con sintomi



Other Internet Monitoring Sources



disease	location	source	author	evidence	score	date
HIV	Italy	Twitter	HumanityNews (Humanitarian News)	News: Patent pool decision heralds era of cheap HIV drugs http://dlvr.it/L5Bq	0	2010-03-22 10:48:14
HIV	Italy	Twitter	USArmyAfrica (USArmyAfrica)	News Update Africa: Steps in the right direction against HIV/ AIDS : Africa's battle against HIV/ AIDS is not ... http://bit.ly/acEbGC #Africa	0	2010-03-22 09:19:32
HIV	Italy	Twitter	romavisibile (Roma Visibile)	Social Romavisibile L' Aids lavorando per il guru e la setta mi ha abbandonata http://ow.ly/16Rhcl	0	2010-03-22 09:16:44
HIV	Italy	Twitter	Grantun19 (Grant Vaughn)	Safety concern for HIV drug combination http://is.gd/aSBEL	0	2010-03-22 08:37:05
HIV	Italy	Twitter	NonProfitBlogs (NonProfitBlogs)	Aids warning over bushmeat trade http://dlvr.it/L31N	0	2010-03-22 06:54:17
HIV	Italy	Twitter	HumanityNews (Humanitarian News)	Blogpost: Aids warning over bushmeat trade http://dlvr.it/L2Gb	0	2010-03-22 05:22:13
HIV	Italy	Twitter	casso89 (Antonino Cassotta)	Farmaco contro l'acne previene riattivazione di HIV latente - http://wp.me/pObs6-6l	0	2010-03-21 22:01:25
HIV	Italy	Twitter	mwbloem (Martin Bloem)	GWU and WFP organized a meeting on nutrition/food security in HIV/ AIDS programs; excellent input to the new WFP's policy on HIV AIDS .	0	2010-03-21 19:08:38
HIV	Italy	Twitter	duduramone (EDUARDO N. VANTINI)	@niderodriguez tomara que vc morra corroido pela aids	0	2010-03-21 17:45:20

What should we do with collected data?

- There are two options:
 - A: the Google Flutrends option: see how beautiful are the charts I can show to you
 - B: the e-science approach

Other Internet Monitoring Sources

google.org Flu Trends

[Google.org home](#)

Flu Trends

Japan

[Download data](#)

[Home](#)

[How does this work?](#)

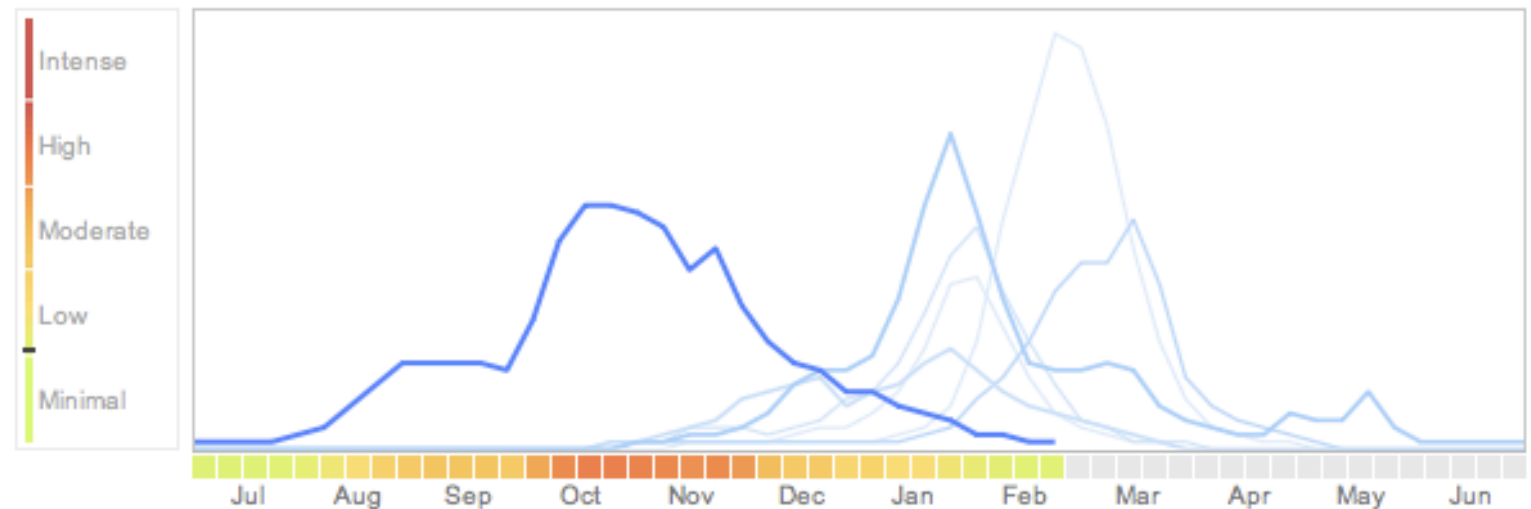
[FAQ](#)

Explore flu trends - Japan

We've found that certain search terms are good indicators of flu activity. Google Flu Trends uses aggregated Google search data to estimate flu activity. [Learn more »](#)

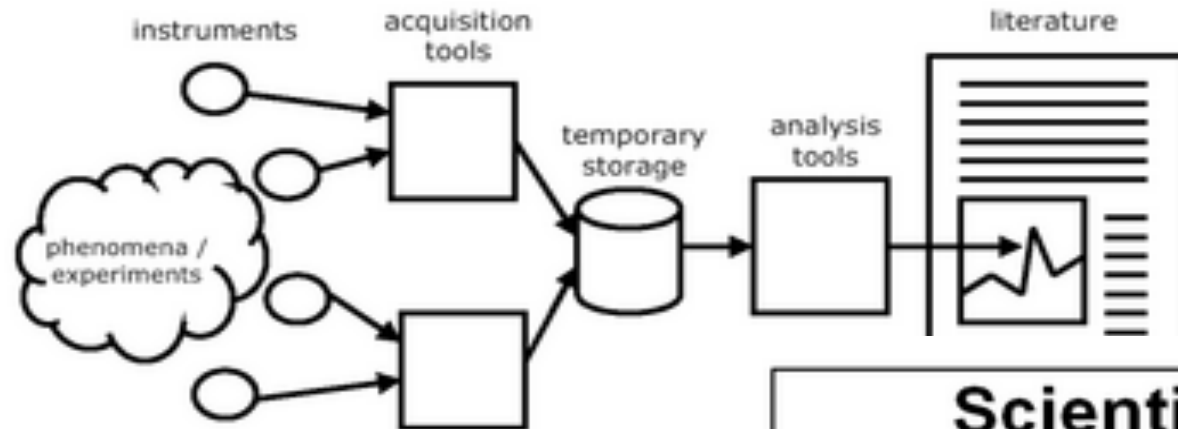
National

● 2009-2010 ● [Past years ▼](#)

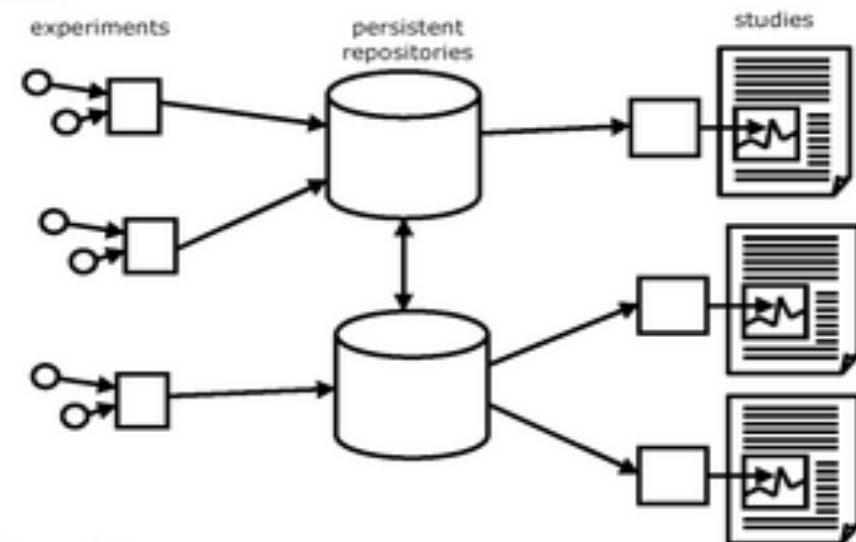


Scientific Data Lifecycle

From this (publish and forget)...



...to this one



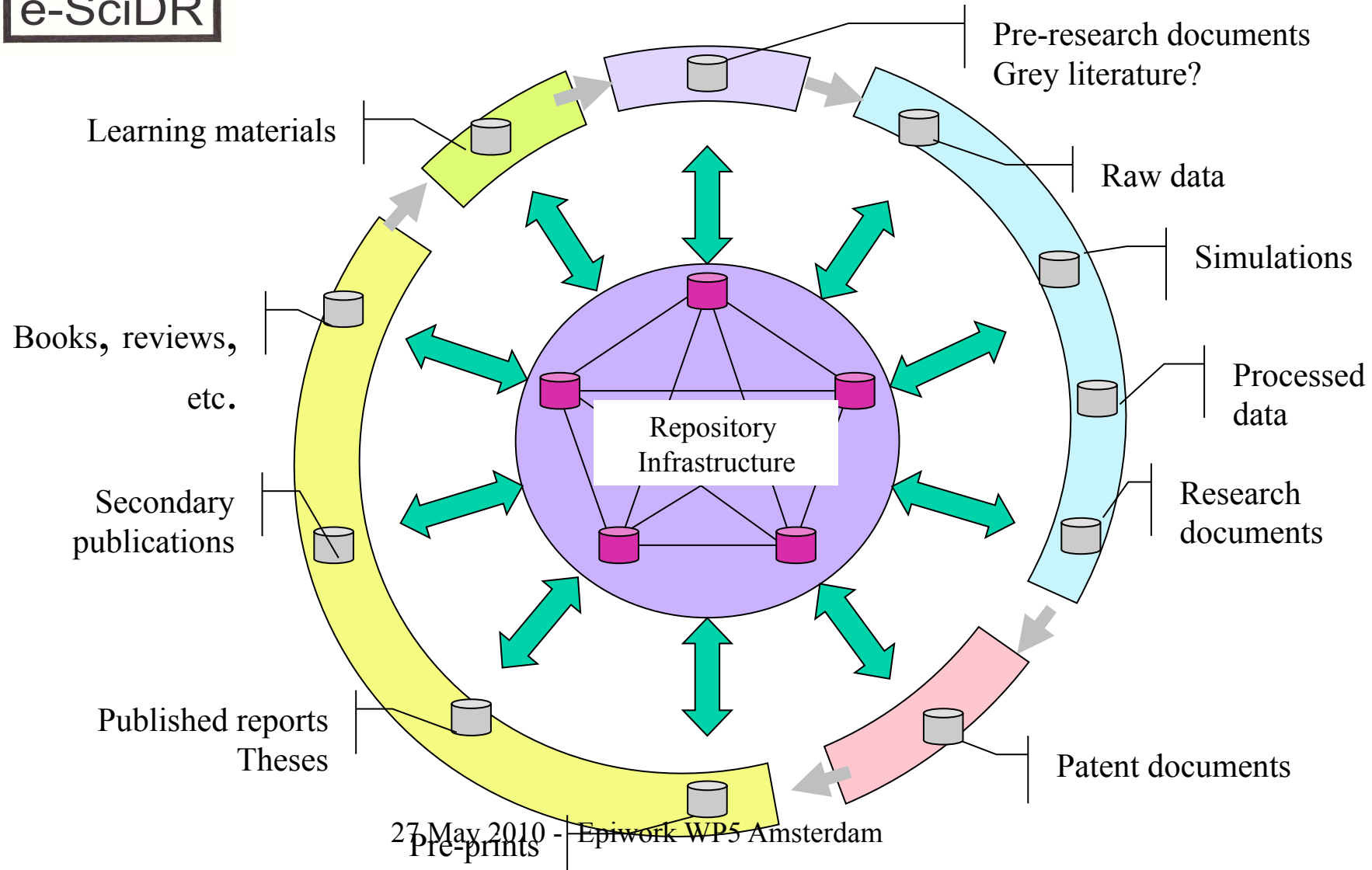
Data in EPIWORK

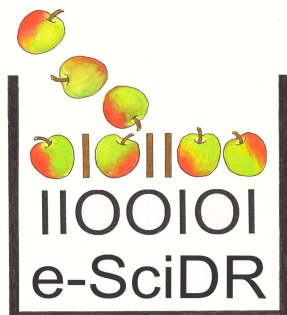
- [National Bureau of Statistics]
demographics, transportation data, ..
- [Public Health authorities]
surveillance data (maybe?)
- **[Internet Social Networks]**
behavioural data

To be shared by epidemic modellers in a digital library, dubbed the **Epidemic Marketplace**

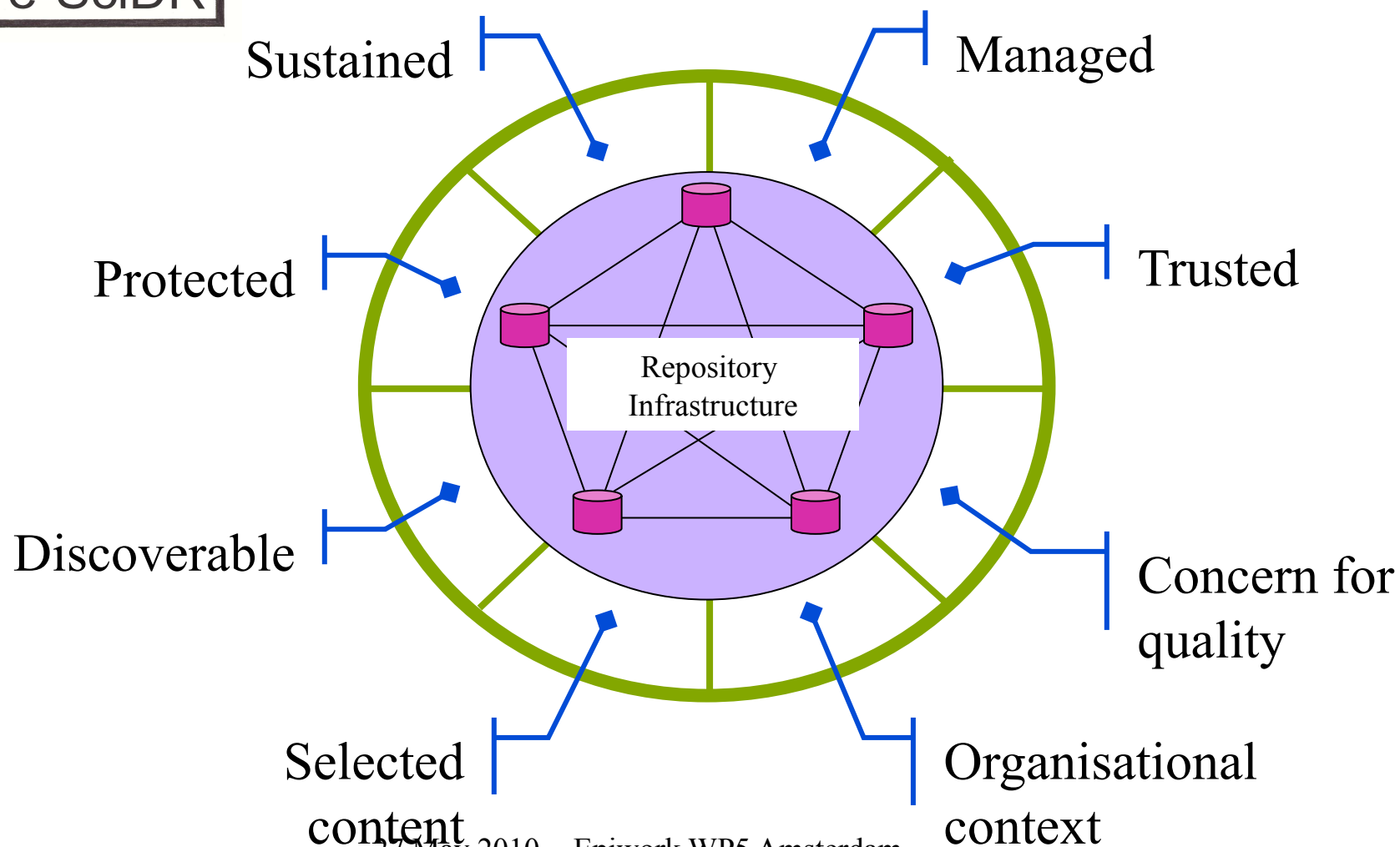
27 May 2010 - Epiwork WP5 Amsterdam

Scientific Repositories

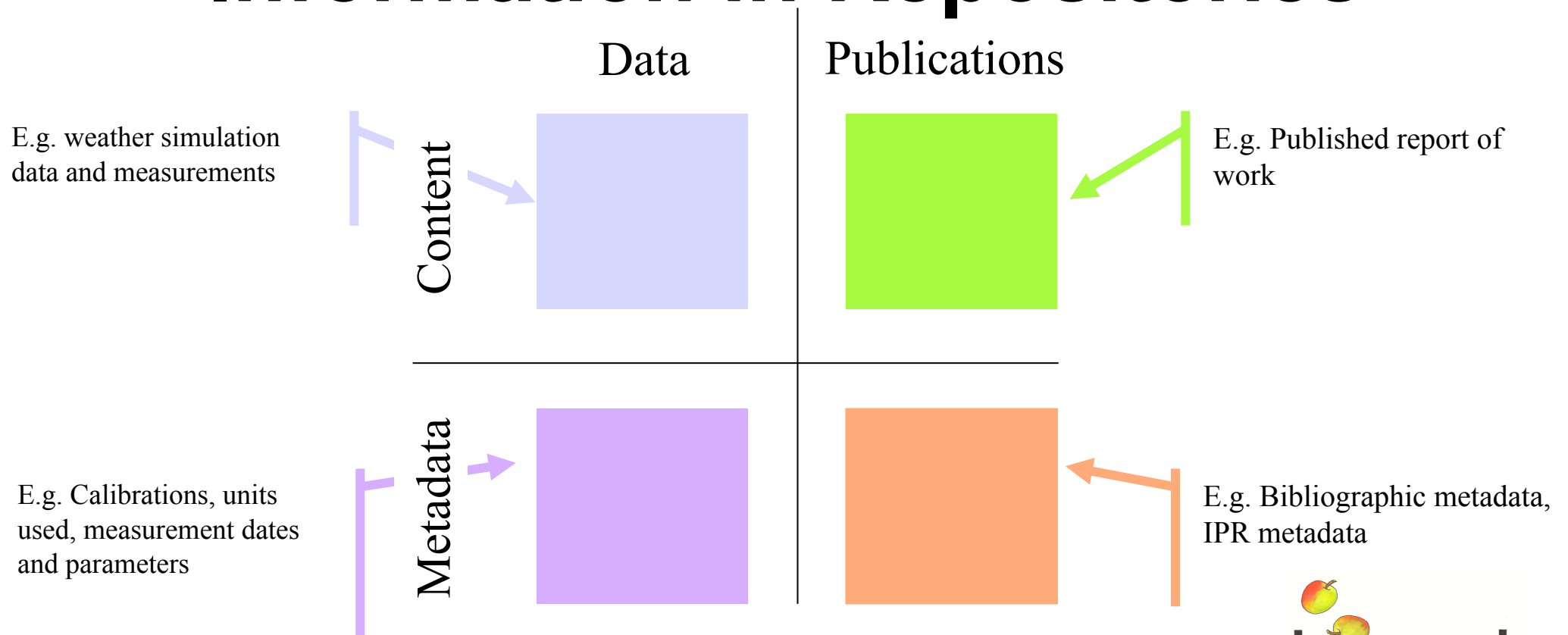




Repository: defining characteristics



Information in Repositories

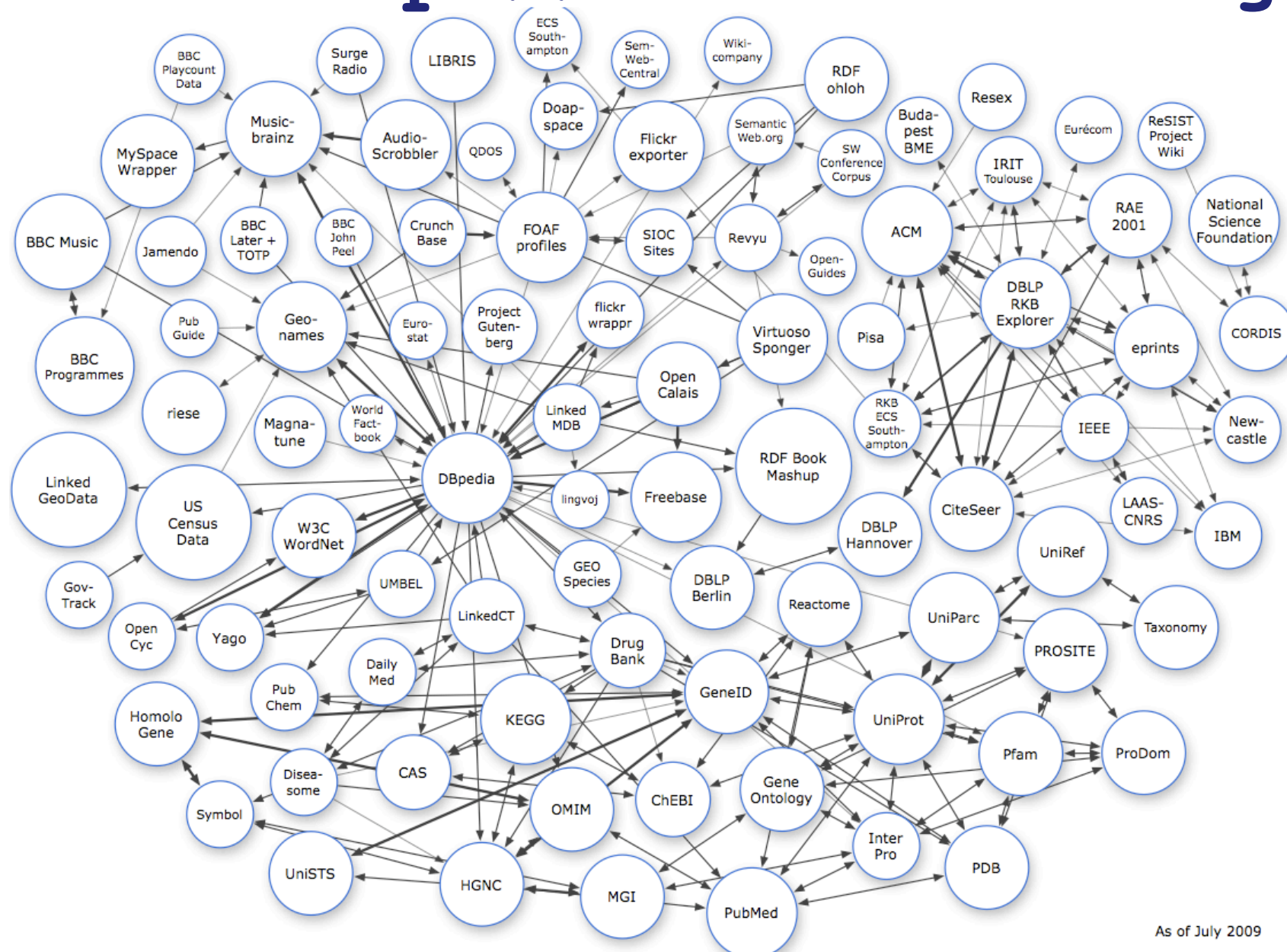


Note: Some initiatives to support end-to-end data efficiency

Challenges: heterogeneity, volumes, dynamic data ...



<http://linkeddata.org/>



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PARTICIPATE.
ENGAGE.

Search the following Data.gov catalogs:



FEATURED TOOL: 2008 MEDICARE MEDICAID STATISTICAL SUPPLEMENT

This Medicare and Medicaid Statistical tool offers approximately 300 pages of statistical information about Medicare, Medicaid, and other Centers for Medicare & Medicaid Services (CMS) programs. The Supplement includes charts and tables showing health expenditures for the entire U.S. population, characteristics of the covered populations, use of services, and expenditures under these programs. It is one of the most comprehensive sources of information available on health care finance in the U.S.

CENTERS for MEDICARE &
MEDICAID SERVICES



[VIEW THIS TOOL](#) ▶


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The purpose of Data.gov is to increase public access to high value, machine readable datasets generated by the Executive Branch of the Federal Government. Although the initial launch of Data.gov

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Data.gov includes searchable [data catalogs](#) providing access to data in three ways: through the "raw" data catalog, the tool catalog and the geodata catalog. Please note that by accessing datasets or

`http://data.gov.uk/data/list?keyword=epidemiology`

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Your search returned 5 records

Alcohol attributable mortality and morbidity: alcohol population attributable fractions for Scotland

Alcohol is linked to many disease conditions and is one of the major risk factors for burden of disease in established market economies. The aim of th...

Tags: [health-well-being-and-care](#) [alcohol](#) [nhsscotland-national-health-service-scotland](#) [scotland](#) [morbidity](#) [health-and-social-care](#) [attributable-fractions](#) [mortality](#)

Autism Spectrum Disorders in adults living in households throughout England


A Clinical Evaluation of the Diagnosis of Autistic Disorder in the Adult Psychiatric Morbidity Survey - a technical study to help establish methods fo...

Tags: [specialist-health-services](#) [-well-being-and-care](#) [health](#) [mental-health-services](#) [health-and-social-care](#) [nhs](#)

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What is the Semantic Web?

Combining different data sources has never been easy but the Semantic Web will enable data to be joined easily across boundaries.

[Read more](#)

questions

- Are we google flu trends or an e-science platform?
 - No sharing, no e-science
- Is IMS data going to stay in the realm of
 - ☐ WP5
 - ☐ Epiwork
 - ☐ epidemiologists
 - ☐ public

Epidemic Marketplace (EM)

1. **Catalogue of data sources** containing the metadata describing existing databases;
2. **Forum** to
 - publish information about data
 - seek modellers to collaborate with,
 - seek sources of data that could be of interest to their epidemiological modelling efforts;
3. **Mediating software** to automatically process queries to epidemiological data, harvest data, assemble datasets....

The EM as a Virtual Repository

- The Epidemic Marketplace is composed of a set of, geographically distributed, **interconnected data management nodes**, sharing:
 - **common data models,**
 - **an authorization infrastructure**
 - **access interfaces.**
- At each node, a set of software components implements a set of requirements that characterize their performance and interfaces.

Current Challenges

- Motivate the community to populate the Epidemic Marketplace.
 - Chicken and egg situation.
- **Data anonymization** is a major concern
 - Rights management to the sentence level!
 - Anyone giving away curated UGC?
 - What if...UGC is ever equated to “clinical” data?
- Access control policies
- Dataset selection and generation policies

Keep in mind that...

- Your output data could be useful input data for others and the platform would be your delivery van